Claims

1.	A computer-based method of processing software written in a programming language and containing data associated with a first locale, to generate a source code file which is locale independent and a resource pack consisting of data associated with the first locale, the source code file being arranged to co-operate with the resource pack to perform the function of the software, the method including:

a first analysis step of using information associated with the programming language to generate a grammar tree representing the structure of the software;

a second analysis step of using the grammar tree and a set of predefined internationalisation rules to identify and separate portions of the software potentially containing data associated with the first locale; and

a partition step of using the identified portions of the software to generate the resource pack, and using the grammar tree to generate the locale independent source code file.

2.	A method according to claim 1 in which the first analysis step includes using the specification of the programming language to perform (i) a scan phase in which the software is grouped into items having a collective meaning, and (ii) a parse phase in which the items are grouped hierarchically to form a grammar tree.

3.	A method according to claim 2 in which the first analysis step further includes, after the parse phase, (iii) a semantic parse phase in which the grammar tree is supplemented by information identifying the function of the items, by reference to other software or a library of source code.

4.	A method according to claim 1 in which the second analysis step includes a step of identifying strings within the software, and excluding from the set of strings any strings which, based on their locations in the grammar tree, do not need to be internationalised.

5.	A method according to claim 1 in which the second analysis step includes a step of identifying functions within the software having respective locale dependent parameters.

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6.   A method according to claim 1 in which the second analysis step further includes using the internationalisation rules to generate suggestions for internationalisation of the identified portions of the software to partition it into locale independent source code and locale dependent resource files.

7.   A method according to claim 1 in which the internationalisation rules are further used in the second analysis step to generate a numerical assessment of the difficulty of internationalising the software.

8.   A method according to claim 1 in which said partition step involves at least some interaction with a user.

9.   A method according to claim 1 in which said partition step is performed entirely automatically.

10.   A computer-based method of transforming software written in a programming language and containing data associated with a first locale into a software for other locales, the method including performing on the first software a method according to claim 1 to generate a source code file which is locale independent and a first resource pack consisting of data associated with the first locale, the source code file being arranged to co-operate with the first resource pack to perform the function of the software, and converting the data in the first resource pack from the first locale to the other locale to form a second resource pack.

11.   A method according to claim 10 in which said step of conversion is performed using a dictionary database for suggesting translations of linguistic items in the resource pack, a user selecting between these translations.

12.   A method according to claim 11 further employing a translation memory which retains a record of translations selected by the user, and uses the selected translations to generate translations for any further instances of the linguistic items in the resource pack.

13.   A computer-based method of processing Website code containing data associated with a first locale, to generate a template file which is locale independent, at least one locale independent resource file, and a resource pack consisting of data

associated with the first locale, the template file being arranged to co-operate with the locale independent Website source file and the resource pack to perform the function of the Website code, the method including:

a first analysis step of using information associated with the language of the Website code to generate a grammar tree representing the structure of the Website code;

a second analysis step of using the grammar tree and a set of predefined internationalisation rules to identify portions of the Website code potentially containing data associated with the first locale; and

a partition step of using the identified portions of the Website code to generate the resource pack, and using the grammar tree to generate the template file and the locale independent Website source file.

14.   A computer-based method of transforming Website code containing data associated with a first locale into Website code containing data associated with another locale, the method including:

performing on the first Website code a method according to claim 13 to generate a template which is locale independent, at least one locale independent Website source file, and a first resource pack consisting of data associated with the first locale, the template file being arranged to co-operate with the resource file and the first resource pack to perform the function of the first Website code, and

converting the data in the first resource pack from the first locale to the other locale to form a second resource pack, said template file.

15.   A computer-based method of converting first computer code containing data associated with a first locale into a form suitable for adaptation to another locale, the method including:

a first analysis step of using information associated with the language of the first computer code to generate a grammar tree representing the structure of the first computer code;

a second analysis step of using the grammar tree and a set of predefined internationalisation rules to identify portions of the first computer code potentially containing data associated with the first locale; and

a partition step of using the identified portions of the first code to generate a resource pack of data associated with the first locale, and using the grammar tree to generate at least one locale independent code file, the or each locale independent code file and the resource pack co-operating to perform the function of the first code.

16. A computer arranged to perform a method according to claim 1.

17. A computer program product such as a recording medium readable by a computer device, and operative to cause the computer device to perform a method according to claim 1.

18. A computer arranged to perform a method according to claim 13.

19. A computer program product such as a recording medium readable by a computer device, and operative to cause the computer device to perform a method according to claim 13.

20. A computer arranged to perform a method according to claim 15.

21. A computer program product such as a recording medium readable by a computer device, and operative to cause the computer device to perform a method according to claim 15.